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ANALYSIS OF THE AWARENESS FACTORS ON DOPING IN INDIA - A PRAGMATIC REVIEW

Jitender Kumar
Assistant Professor
D.A.V. (P.G.) College
Karnal, Haryana, India

ABSTRACT

Doping refers to the use of banned performance-enhancing drugs in sports, particularly by the organizations that regulate sporting competitions. The use of drugs to enhance performance is considered unethical by most international sports organizations, including the International Olympic Committee, although ethicists have argued that it is not different from the use of new materials in the construction of suits and sporting equipment, which can also aid performance and give competitors an unfair advantage. The origins of doping in sports go back to the very creation of sport itself. A number of doping incidents are reported in international games. Many of these can be due to non awareness in the sportsmen, but it is the responsibility of government and related agencies to create the suitable training sessions and scenarios for the training and awareness about doping. This paper emphasizes assorted aspects of doping and the ban status in sports.

Keywords - Doping, Sports and Doping, Ban of Doping

INTRODUCTION

The use of drugs in sports goes back centuries, about all the way back to the very invention of the concept of sports. In ancient times, when the fittest of a nation were selected as athletes or combatants, they were fed diets and given treatments considered beneficial. For instance, Scandinavian mythology says Berserkers could drink a mixture called "butotens", to greatly increase their physical power at the risk of insanity. One theory is that the mixture was prepared from the Amanita muscaria mushroom, though this has been disputed and other causes suggested. The German missionary and doctor Albert Schweitzer wrote of Gabon in the early 19th century: "The people of the

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country can, having eaten certain leaves or roots, toil vigorously all day without feeling hungry, thirsty or tired and all the time showing a happiness and gaiety."

The ancient Olympics in Greece have been alleged to have been contaminated with forms of doping. In ancient Rome, where chariot racing had become a huge part of their culture, athletes drank herbal infusions to strengthen them before chariot races.

More recently, a participant in an endurance walking race in Britain, Abraham Wood, said in 1807 that he had used laudanum (which contains opiates) to keep him awake for 24 hours while competing against Robert Barclay Allardyce. By April 1877, walking races had stretched to 500 miles and the following year, also at the Agricultural Hall in Islington, London, to 520 miles.

DOPING IN THE OLYMPICS

The use of performance-enhancing drugs (PEDs) has had a long history at the Olympic Games. Its origins can be traced back to the Ancient Olympics where Olympians would eat lizard meat prepared a special way, in the hopes that it would give them an athletic edge. The first documented use of drugs to improve an athlete's performance was the winner of the 1904 marathon, Thomas Hicks who was injected with strychnine. The use of performance-enhancing medication has also been attributed to one death during Olympic competition. As rumors of rampant drug use by athletes began to spread, so the International Olympic Committee (IOC) decided to act. By 1967, the IOC had banned the use of performance enhancing drugs in Olympic competition. The IOC introduced the first drug use controls at the 1968 Winter Olympics.

These controls eventually evolved into a systematic-testing regimen that all Olympic athletes must adhere to. Testing of athletes for performance-enhancing drugs includes both urine and blood tests. As of 1999, the authoritative body on the use of performance-enhancing drugs is the World Anti-Doping Agency (WADA). This organization oversees the testing of athletes for several sports federations and the Olympic Games. As the creators of these drugs continue to improve their sophistication, potency and transparency, WADA and its constituency also innovate new ways to detect these drugs. Athletes continue to use various medical modifications to their body as a means of improving their athletic performances.

PROHIBITED DRUGS

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What follows is a list of all the athletes that have tested positive for a banned substance either during or after an Olympic Games in which they competed. Any medals listed were revoked by the International Olympic Commission (IOC). In 1967 the IOC banned the use of performance-enhancing drugs, instituted a Medical Commission, and created a list of banned substances.

Mandatory testing began at the following years Summer and Winter games.

1968 Mexico City

Name	Sport	Banned substance
Hans-Gunnar Liljenwall	Modern pentathlon	Ethanol

1972 Munich

Name	Sport	Banned substance
Bakaava Buidaa	Judo	Caffeine
Rick DeMont	Swimming	Ephedrine
Jaime Huélamo	Cycling	Coramine
Walter Legel	Weightlifting	Amphetamine
Mohammad Reza Nasehi	Weightlifting	Ephedrine
Aad van den Hoek	Cycling	Coramine

1976 Montreal

Name	Sport	Banned substance
Blagoi Blagoev	Weightlifting	Anabolic steroid
Mark Cameron	Weightlifting	Anabolic steroid
Paul Cerutti	Shooting	Amphetamine
Dragomir Ciorosian	Weightlifting	Fencanfamine
Philippe Grippaldi	Weightlifting	Anabolic steroid
Zbigniew Kaczmarek	Weightlifting	Anabolic steroid

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Name	Sport	Banned substance
Valentin Khristov	Weightlifting	Anabolic steroid
Lorne Liebel	Sailing	Phenylpropanolamine
Arne Norrback	Weightlifting	Anabolic steroid
Peter Pavlasek	Weightlifting	Anabolic steroid
Danuta Rosani	Athletics	Anabolic steroid

1980 Moscow

Though no athletes were caught doping at the 1980 Summer Olympics, it has been claimed that athletes had begun using testosterone and other drugs for which tests had not been yet developed. A 1989 report by a committee of the Australian Senate claimed that "there is hardly a medal winner at the Moscow Games, certainly not a gold medal winner...who is not on one sort of drug or another: usually several kinds. The Moscow Games might well have been called the Chemists' Games".

A member of the IOC Medical Commission, Manfred Donike, privately ran additional tests with a new technique for identifying abnormal levels of testosterone by measuring its ratio to epitestosterone in urine. Twenty percent of the specimens he tested, including those from sixteen gold medalists would have resulted in disciplinary proceedings had the tests been official. The results of Donike's unofficial tests later convinced the IOC to add his new technique to their testing protocols. The first case of "blood doping" occurred at the 1980 Summer Olympics as a runner was transfused with two pints of blood before winning medals in the 5000 m and 10,000 m.

1984 Los Angeles

Name	Sport	Banned substance
Serafim Grammatikopoulos	Weightlifting	Nandrolone
Vésteinn Hafsteinsson	Athletics	Nandrolone
Tomas Johansson	Wrestling	Methenolone
Stefan Laggner	Weightlifting	Nandrolone
Göran Petersson	Weightlifting	Nandrolone
Eiji Shimomura	Volleyball	Testosterone

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Name	Sport	Banned substance
Mikiyasu Tanaka	Volleyball	Ephedrine
Ahmed Tarbi	Weightlifting	Nandrolone
Mahmud Tarha	Weightlifting	Nandrolone
Gianpaolo Urlando	Athletics	Testosterone
Martti Vainio	Athletics	Methenolone
Anna Verouli	Athletics	Nandrolone

1988 Seoul

Name	Sport	Banned substance
Alidad	Wrestling	Furosemide
Kerrith Brown	Judo	Furosemide
Kalman Csengeri	Weightlifting	Stanozolol
Mitko Grablev	Weightlifting	Furosemide
Angell Guenchev	Weightlifting	Furosemide
Ben Johnson	Athletics	Stanozolol
Fernando Mariaca	Weightlifting	Pemoline
Jorge Quesada	Modern pentathlon	Propanolol
Andor Szanyi	Weightlifting	Stanozolol
Alexander Watson	Modern Pentathlon	Caffeine

1992 Barcelona

Name	Sport	Banned substance
Madina Biktagirova	Athletics	Norephedrine
Wu Dan	Volleyball	Strychnine
Bonnie Dasse	Athletics	Clenbuterol

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Name	Sport	Banned substance
Jud Logan	Athletics	Clenbuterol
Nijolė Medvedeva	Athletics	Meziocarde

1996 Atlanta

Name	Sport	Banned substance
Iva Prandzheva	Athletics	Metadienone
Natalya Shekhodanova	Athletics	Stanozolol

2000 Sydney

Name	Sport	Banned substance
Fritz Aanes	Wrestling	Norandrosterone and noretiochdandone
Ashot Danielyan	Weightlifting	Stanozolol
Izabela Dragneva	Weightlifting	Furosemide
Stian Grimseth	Weightlifting	Nandrolone
Ivan Ivanov	Weightlifting	Furosemide
Marion Jones	Athletics	THG
Alexander Leipold	Wrestling	Nandrolone
Sevdalin Minchev	Weightlifting	Furosemide
Antonio Pettigrew	Athletics	EPO and HGH
Oyuunbilegiin Pürevbaatar	Wrestling	Furosemide
Andreea Răducan	Gymnastics	Pseudophedrine
Andris Reinholds	Rowing	Nandrolone
Jerome Young	Athletics	Nandrolone

2004 Athens

Name	Sport	Banned substance

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Name	Sport	Banned substance
Wafa Ammouri	Weightlifting	Anabolic steroid
Adrián Annus	Athletics	Falsified test result
Ludger Beerbaum	Equestrian	Betamethasone (to horse Goldfever)
Yuriy Bilonog	Athletics	Oxandrolone
Andrew Brack	Baseball	Stanozolol
Viktor Chislean	Weightlifting	Anabolic steroid
Crystal Cox	Athletics	Anabolic steroid
Róbert Fazekas	Athletics	Missed the test
Mabel Fonseca	Wrestling	Stanozolol
Anton Galkin	Athletics	Stanozolol
Ferenc Gyurkovics	Weightlifting	Oxanfrolone
Tyler Hamilton	Cycling	Blood doping
Zoltan Kecskes	Weightlifting	Anabolic steroid
Albina Khomic	Weightlifting	Testosterone
Aye Khine Nan	Weightlifting	Anabolic steroid
Irina Korzhanenko	Athletics	Stanozolol
Zoltán Kovács	Weightlifting	Missed the test
Svetlana Krivelyova	Athletics	Oxandrolone
Pratima Kumari Na	Weightlifting	Anabolic steroid
Aleksey Lesnichiy	Athletics	Clenbuterol
David Munyasia	Boxing	Cathine
Derek Nicholson	Baseball	Diuretic
Cian O'Connor	Equestrian	Antipsychotics (to horse Waterford Crystal)
Olena Olefirenko	Rowing	Ethamivan
Oleg Perepetchenov	Weightlifting	Clenbuterol

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Name	Sport	Banned substance
Leonidas Sampanis	Weightlifting	Testosterone
Thinbaijam Sanamcha Chanu	Weightlifting	Furosemide
Mital Sharipov	Weightlifting	Furosemide
Olga Shchukina	Athletics	Clenbuterol
Sahbaz Sule	Weightlifting	Anabolic steroid
Ekaterini Thanou	Athletics	Missed the test
Ivan Tsikhan	Athletics	Methandienone
Irina Yatchenko	Athletics	Methandienone

2008 Beijing

Name	Sport	Banned substance
Christian Ahlmann	Equestrian	Capsaicin
Bernardo Alves	Equestrian	Capsaicin
Lyudmila Blonska	Athletics	Methyltestosterone
Fani Halkia	Athletics	Methyltrienolone
Tony André Hansen	Equestrian	Capsaicin
Kim Jong-su	Shooting	Propranolol
Courtney King	Equestrian	Felbinac
Denis Lynch	Equestrian	Capsaicin
Maria Isabel Moreno	Cycling	Erythropoietin
Vanja Perisic	Athletics	CERA
Rodrigo Pessoa	Equestrian	Nonivamide
Rashid Ramzi	Athletics	CERA

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Name	Sport	Banned substance
Igor Razoronov	Weightlifting	Nandrolone
Davide Rebellin	Cycling	CERA
Stefan Schumacher	Cycling	CERA
Adam Seroczyński	Canoeing	Clenbuterol
Do Thi Ngan Thuong	Gymnastics	Furosemide
Athanasia Tsoumeleka	Athletics	CERA

2012 London

Name	Sport	Banned substance
Ghfran Almouhamad	Athletics	Methylhexaneamine
Victoria Baranova	Cycling	Male hormone testosterone
Kissya Cataldo	Rowing	EPO
Nicholas Delpopolo	Judo	Cannabis
Luiza Galiulina	Gymnastics	Furosemide
Hassan Hirt	Athletics	EPO
Amine Laâlou	Athletics	Furosemide
Marina Marghiev	Athletics	Furosemide
Nadzeya Ostapchuk	Athletics	Methenolone
Diego Palomeque	Athletics	Exogenous testosterone
Darya Pishchalnikova	Athletics	Oxandrolone
Hysen Pulaku	Weightlifting	Stanozolol
Alex Schwazer	Athletics	EPO
Soslan Tigiev	Wrestling	Methylhexaneamine

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Name	Sport	Banned substance
Tameka Williams	Athletics	"Blast Off Red"

ANTI DOPING AWARENESS PROGRAMME OF INDIA

NADA is actively involved in educating the athletes/sportspersons located at various training centres throughout India. In this regard, NADA has organized 45 workshops/seminars and awareness programme on Anti Doping issues in the year 2013-14.

NADA has developed an extensive education program namely Program for Education and Awareness on Anti Doping in Sports (PEADS). To know the exact requirement for this purpose an Information and Education Committee (IEC) expert group has been constituted under the Chairmanship of Director General, NADA to assist and advice NADA. PEADS is a comprehensive program that has been planed with an objective to deal with different stakeholders in the country. Each stakeholder is clearly defined in this program as key stakeholder. The main stakeholders are NADA, followed by Sports Authority of India (SAI) and National Dope Testing Laboratory (NDTL).

National Anti Doping Agency is mandated for Dope free sports in India. The primary objectives are to implement anti-doping rules as per WADA code, regulate dope control programme, to promote education and research and creating awareness about doping and its ill effects.

The primary functions of NADA are as under:

- To implement the Anti Doping Code to achieve compliance by all sports organizations in the Country.
- To coordinate dope testing program through all participating stakeholders.
- To promote anti doping research and education to inculcate the value of dope free sports.
- To adopt best practice standards and quality systems to enable effective implementation and continual improvement of the program.

SUBSTANCES BANNED ALL TIME - SPECIFIED SUBSTANCE

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In accordance with Article 4.2.2 of the World Anti-Doping Code, all Prohibited Substances shall be considered as "Specified Substances" except Substances in classes S1, S2, S4.4, S4.5, S6.a, and Prohibited Methods M1, M2 and M3.

S0. NON-APPROVED SUBSTANCES

Any pharmacological substance which is not addressed by any of the subsequent sections of the List and with no current approval by any governmental regulatory health authority for human therapeutic use (e.g drugs under pre-clinical or clinical development or discontinued, designer drugs, substances approved only for veterinary use) is prohibited at all times.

S1. ANABOLIC AGENTS

Anabolic agents are prohibited.

1. Anabolic Androgenic Steroids (AAS)

a. Exogenous* AAS, including:

1-androstenediol (5α-androst-1-ene-3β,17β-diol); 1-androstenedione (5α-androst-1-ene-3,17-dione); bolandiol (estr-4-ene-3β,17β-diol); bolasterone; boldenone; boldione (androsta-1,4-diene-3,17-dione); calusterone; clostebol; danazol ([1,2]oxazolo[4',5':2,3]pregna-4-en-20-yn-17α-ol); dehydrochlormethyltestosterone (4-chloro-17β-hydroxy-17α-methylandrosta-1,4-dien-3-one); desoxymethyltestosterone (17α-methyl-5α-androst-2-en-17β-ol); drostanolone; ethylestrenol (19-norpregna-4-en-17α-ol); fluoxymesterone; formebolone; furazabol (17α-methyl [1,2,5]oxadiazolo[3',4':2,3]-5α-androstan-17β-ol); gestrinone; 4-hydroxytestosterone (4,17β-dihydroxyandrost-4-en-3-one); mestanolone; mesterolone; metandienone (17β-hydroxy-17α-methylandrosta-1,4-dien-3-one); metenolone; methandriol; methasterone (17β-hydroxy-2α,17α-dimethyl-5α-androstan-3-one); methyldienolone (17β-hydroxy-17α-methylestra-4,9-dien-3-one); methyl-1-testosterone (17β-hydroxy-17α-methyl-5α-androst-1-en-3-one); methylnortestosterone (17β-hydroxy-17α-methylestr-4-en-3-one); methyltestosterone; metribolone (methyltrienolone, 17β-hydroxy-17α-methylestra-4,9,11-trien-3-one); mibolerone; nandrolone; 19-norandrostenedione (estr-4-ene-3,17-dione); norboletone; norclostebol; norethandrolone; oxabolone; oxandrolone; oxymesterone; oxymetholone; prostanozol (17β-[(tetrahydropyran-2-yl)oxy]-1'H-pyrazolo[3,4:2,3]-5α-androstane); quinbolone; stanozolol; stenbolone; 1-testosterone (17β-hydroxy-5α-androst-1-en-3-one); tetrahydrogestrinone (17-hydroxy-18a-homo-19-nor-17α-pregna-4,9,11-trien-3-one); trenbolone (17β-hydroxyestr-4,9,11-trien-3-one); and other substances with a similar chemical structure or similar biological effect(s).

b. Endogenous** AAS when administered exogenously:

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Androstenediol (androst-5-ene-3β,17β-diol); androstenedione (androst-4-ene-3,17-dione); dihydrotestosterone (17β-hydroxy-5α-androstan-3-one); prasterone (dehydroepiandrosterone, DHEA, 3β-hydroxyandrost-5-en-17-one); testosterone;

and their metabolites and isomers, including but not limited to:
5α-androstane-3α,17α-diol; 5α-androstane-3α,17β-diol; 5α-androstane-3β,17α-diol; 5α-androstane-3β,17β-diol; 5β-androstane-3α,17β-diol; androst-4-ene-3α,17α-diol; androst-4-ene-3α,17β-diol; androst-4-ene-3β,17α-diol; androst-5-ene-3α,17α-diol; androst-5-ene-3α,17β-diol; androst-5-ene-3β,17α-diol; 4-androstenediol (androst-4-ene-3β,17β-diol); 5-androstenedione (androst-5-ene-3,17-dione);androsterone(3β-hydroxy-5α-androstan-17-one) epi-dihydrotestosterone; epitestosterone; etiocholanolone; 7α-hydroxy-DHEA; 7β-hydroxy-DHEA;7-keto-DHEA;19-norandrosterone;19-noretiocholanolone.

2.Other Anabolic Agentsincluding but not limited to:
Clenbuterol, selective androgen receptor modulators (SARMs,e.g. andarine and ostarine), tibolone, zeranol and zilpaterol.

For purposes of this section:
* "exogenous" refers to a substance which is not ordinarily produced by the body naturally.
** "endogenous" refers to a substance which is ordinarily produced by the body naturally.

S2. PEPTIDE HORMONES, GROWTH FACTORS AND RELATED SUBSTANCES AND MIMETICS
The following substances and their releasing factors are prohibited:
1. Erythropoietin-Receptor agonists
1.1 Erythropoiesis-Stimulating Agents (ESAs) including e.g. darbepoietin (dEPO); erythropoietins (EPO); EPO-Fc; EPO-mimetic peptides (EMP), e.g. CNTO 530 and peginesatide; and methoxy polyethylene glycol-epoetin beta (CERA);
1.2 Non-erythropoietic EPO-Receptor agonists, e.g. ARA-290, asialo EPO and carbamylated EPO;
2. Hypoxia-inducible factor (HIF) stabilizers, e.g. cobalt and FG-4592; and HIF activators, e.g. argon, xenon;
3. Chorionic Gonadotrophin (CG) and Luteinizing Hormone (LH) and their releasing factors, e.g. buserelin, gonadorelin and triptorelin, in males;
4. Corticotrophins and their releasing factors;e.g corticorelin;

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5. Growth Hormone (GH) and its releasing factors includingGrowth Hormone Releasing Hormone (GHRH)and itsanalogues,e.g.CJC-1295, sermorelin and tesamorelin; Growth Hormone Secretagogues (GHS), e.g. ghrelin and ghrelin mimetics, e.g. anamorelin and ipamorelin; and GH-Releasing Peptides (GHRPs), e.g. alexamorelin, GHRP-6, hexarelin and pralmorelin (GHRP-2).

Additional prohibited growth factors:
Fibroblast Growth Factors (FGFs), Hepatocyte Growth Factor (HGF),Insulin-like Growth Factor-1 (IGF-1), and its analogues; Mechano Growth Factors (MGFs), Platelet-Derived Growth Factor (PDGF), Vascular-Endothelial Growth Factor (VEGF) and any other growth factor affecting muscle, tendon or ligament protein synthesis/degradation, vascularisation, energy utilization, regenerative capacity or fibre type switching.

S3. BETA-2 AGONISTS
All beta-2 agonists, including all optical isomers, e.g. d- and l- where relevant, are prohibited
Except:
• Inhaled salbutamol (maximum 1600 micrograms over 24 hours);
• Inhaled formoterol (maximum delivered dose 54 micrograms over 24 hours); and
• Inhaled salmeterol in accordance with the manufacturers' recommended therapeutic regimen.
The presence in urine of salbutamol in excess of 1000 ng/mL or formoterol in excess of 40 ng/mL is presumed not to be an intended therapeutic use of the substance and will be considered as an Adverse Analytical Finding (AAF) unless the Athlete proves, through a controlled pharmacokinetic study, that the abnormal result was the consequence of the use of the therapeutic inhaled dose up to the maximum indicated above.

S4. HORMONE AND METABOLIC MODULATORS
The following hormones and metabolic modulators are prohibited:
1. Aromatase inhibitors including, but not limited to: aminoglutethimide, anastrozole, androsta-1,4,6-triene-3,17-dione (androstatrienedione), 4-androstene-3,6,17 trione (6-oxo), exemestane, formestane, letrozole, testolactone.
2. Selective estrogen receptor modulators (SERMs) including, but not limited to: raloxifene, tamoxifen, toremifene.
3. Other anti-estrogenic substances including, but not limited to: clomiphene, cyclofenil, fulvestrant.
4. Agents modifying myostatin function(s) including, but not limited, to: myostatin inhibitors.
5. Metabolic modulators:
5.1 Activators of the AMP-activated protein kinase (AMPK), e.g. AICAR; and Peroxisome Proliferator Activated Receptor δ (PPARδ) agonists, e.g. GW 1516;

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5.2 Insulins
5.3> Trimetazidine.

S5. DIURETICS AND OTHER MASKING AGENTS
The following diuretics and masking agents are prohibited, as are other substances with a similar chemical structure or similar biological effect(s).
Including, but not limited to:
• Desmopressin; probenecid; plasma expanders, e.g. glycerol and intravenous administration of albumin, dextran, hydroxyethyl starch and mannitol.
• Acetazolamide; amiloride; bumetanide; canrenone; chlortalidone; etacrynic acid; furosemide; indapamide; metolazone; spironolactone; thiazides, e.g. bendroflumethiazide, chlorothiazide and hydrochlorothiazide; triamterene and vaptans, e.g. tolvaptan.
Except:
• Drospirenone; pamabrom; and topical dorzolamide and brinzolamide.
• Local administration of felypressin in dental anaesthesia.
The detection in an Athlete's Sample at all times or In-Competition, as applicable, of any quantity of the following substances subject to threshold limits: formoterol, salbutamol, cathine, ephedrine, methylephedrine and pseudoephedrine, in conjunction with a diuretic or masking agent, will be considered as an Adverse Analytical Finding unless the Athlete has an approved TUE for that substance in addition to the one granted for the diuretic or masking agent.

PROHIBITED METHODS
M1. MANIPULATION OF BLOOD AND BLOOD COMPONENTS

The following are prohibited:
1.The Administration or reintroduction of any quantity of autologous, allogenic (homologous) or heterologous blood, or red blood cell products of any origin into the circulatory system.
2. Artificially enhancing the uptake, transport or delivery of oxygen.Including, but not limited to: perfluorochemicals, efaproxiral (RSR13) and modified haemoglobin products (e.g. haemoglobin-based blood substitutes, microencapsulated haemoglobin products), excluding supplemental oxygen.
3. Any form of intravascular manipulation of the blood or blood components by physical or chemical means.

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M2. CHEMICAL AND PHYSICAL MANIPULATION

The following are prohibited:

1. Tampering, or Attempting to Tamper, to alter the integrity and validity of Samples collected during Doping Control.Including, but not limited to:Urine substitution and/or adulteration, e.g. proteases.

2. Intravenous infusions and/or injections of more than 50 mL per 6 hour period except for those legitimately received in the course of hospital admissions, surgical procedures or clinical investigations.

M3. GENE DOPING

The following, with the potential to enhance sport performance, are prohibited:

1. The transfer of polymers of nucleic acids or nucleic acid analogues;

2. The use of normal or genetically modified cells.

The National Dope Testing Laboratory (NDTL) is an autonomous body under Ministry of Skill Development, Entrepreneurship, Youth Affairs and Sports, Government of India. It is accredited by National Accreditation Board for Testing & Calibration Laboratories, NABL (2003) and World Anti Doping Agency (WADA) (2008) for testing of urine & blood samples from human sports. The accreditation for the testing of blood samples (Human Growth Hormone & Blood Parameters) acquired in April 2010.

CONCLUSION

Strychnine, caffeine, cocaine, and alcohol were often used by assorted endurance athletes in the 19th century. Thomas Hicks ran to victory in the marathon at the 1904 Olympic Games, in Saint Louis, with the help of raw egg, injections of strychnine and doses of brandy administered to him during the race. Now days, there is need to aware the sports agencies about the hidden factors and aspects of doping. It is necessary to generate and implement the rigorous doping awareness to the sportsmen so that the transparent and effective sports culture can be promoted. A number of agencies are working in this direction including government bodies, still there is need to aware the related sportsmen and coaches to avoid any problematic instances.

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